

DOON UNIVERSITY, DEHRADUN

Semester Mid-term Examination, First Semester, 2014 School of social science

M.Sc. (Economics)

Course: SSEI-112-Mathematics I

Time Allowed: 2 Hours

Maximum Marks: 30

Note: Attempt All Questions from Sections A, B, C.

SECTION: A (Short Answer Type Questions/ to be answered in about 25/75 words. Attempt any three Questions (3*2=6 marks)

- 1. Prove that $\sim (P \rightarrow Q) = P^{\sim}Q$
- 2. What is the straight line? What is the formula for the gradient of the straight line?
- 3. What you mean by relation and type of the relation.
- 4. Solve:

$$\frac{a-x}{a} + \frac{2a-x}{2a} = \frac{3a-x}{3a}$$

SECTION: B: attempt any three. (Short Answer Type Questions to be answered in about 100/250 words) (3*4=12 marks)

- 1. The line passing through the point (3,-2) and inclined at 45 degree to the X axis, meet the line $\sqrt{2}x+2\sqrt{2}y-6=0$ in the point p. find the distance between points.
- 2. Solve the equations:

$$X^2 + xy + y^2 = 19$$

$$X^2 - xy + y^2 = 7$$

- 3. Construct the table for $p \rightarrow \{(qvr) \land \neg (p \leftrightarrow \neg r)\}$
- 4. What are the functions or mapping? Discuss the types of mapping.

SECTION: C attempt any two questions. (Long Answer Type Questions to be answered in about 750 words (2*6=12 marks)

1. Solve the equation

 $X^4 + 2x^3 - 13x^2 + 2x + 1 = 0$

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2.	What you under	stand by co-ordir	iate geometry. E	xplain its develo	oment and appli	cation
	areas.			•		
3.	The sum of two					
N P. P. 1777 MAY S A S A S A S A S A S A S A S A S A S	$-X^4 - 8x^3 + 9x^2 + 4\lambda x +$	2=0 is equal to th	e sum of the oth	ier two roots find	$l \lambda$ and solve the	equation.
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	$(x_1, \dots, x_n) \in \mathcal{F}_{p_n} \times $	And the second second				
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